

WHAT IS CLAIMED IS:

1. A stand-alone laparoscopic medical instrument insertable through a laparoscopic trocar sleeve, said instrument comprising:
 - an elongate shaft;
 - an operative tip disposed at one end of said shaft; and
 - an actuator disposed at an opposite end of said shaft, said actuator being operatively connected to said operative tip via said shaft for controlling the operation of said operative tip,said shaft having a proximal end portion and middle portion and a distal end portion, at least said distal end portion being independently bendable to form a C shape, adjacent segments of said shaft being relatively rotatable about a longitudinal axis at least at one location along the instrument's shaft.
2. The instrument defined in claim 1 wherein said distal end portion is continuously bendable into a smoothly curved C-shaped configuration.
3. The instrument defined in claim 2, further comprising a lock operatively connected to said shaft for releasably maintaining said C-shaped curved configuration.
4. The instrument defined in claim 1 wherein said distal end portion has an articulated joint.
5. The instrument defined in claim 1 wherein said proximal end portion is independently bendable to form a C shape.
6. A stand-alone laparoscopic medical instrument insertable through a laparoscopic trocar sleeve, said instrument comprising:
 - an elongate shaft;
 - an operative tip disposed at one end of said shaft;
 - an actuator disposed at an opposite end of said shaft, said actuator being operatively coupled to said operative tip via said shaft,

a first mechanism operatively connected to said shaft for bending a proximal portion of said shaft in a first direction; and

a second mechanism operatively connected to said shaft for bending a distal portion of said shaft in a second direction different from said first direction, whereby said shaft assumes a shape with a plurality of differently shaped segments.

7. The instrument defined in claim 6 wherein said shaft has a longitudinal axis at said one end, further comprising a rotation mechanism operatively connected to said shaft for rotating said operative tip about said axis.

8. The instrument defined in claim 6, further comprising a first locking element operatively connected to said first mechanism and a second locking element operatively connected to said second mechanism, whereby said proximal portion and said distal portion may be maintained as said differently shaped segments.

9. The instrument defined in claim 6 wherein said proximal portion and said distal portion are bendable by said first mechanism and said second mechanism in a common plane, further comprising an additional mechanism operatively connected to said shaft for bending said distal portion of said shaft in an additional direction out of said plane.

10. The instrument defined in claim 6 wherein said proximal portion of said shaft assumes a first C-shaped configuration in response to operation of said first mechanism and wherein said distal portion of said shaft assumes a second C-shaped configuration in response to operation of said second mechanism, said first C-shaped configuration and said second C-shape configuration facing opposite sides of said shaft.

11. A laparoscopic medical instrument comprising:
an elongate flexible shaft;
an operative tip disposed at one end of said shaft;
an actuator disposed at an opposite end of said shaft, said actuator being operatively coupled to said operative tip via said shaft,

a first bending mechanism operatively connected to said shaft for curving a proximal portion of said shaft in a first direction; and

a second bending mechanism operatively connected to said shaft for curving a distal portion of said shaft in a second direction different from said first direction, whereby said shaft assumes a shape with a plurality of arcuate segments.

12. The instrument defined in claim 11 wherein said shaft has a longitudinal axis at said one end, further comprising a rotation mechanism operatively connected to said shaft for rotating said operative tip about said axis.

13. The instrument defined in claim 11, further comprising a first locking element operatively connected to said first bending mechanism and a second locking element operatively connected to said second bending mechanism.

14. The instrument defined in claim 11 wherein said first bending mechanism and said second bending mechanism each include a manual actuator mounted to said shaft at said other end thereof.

15. The instrument defined in claim 11 wherein said proximal portion and said distal portion are bendable by said first bending mechanism and said second bending mechanism in a common plane, further comprising an additional bending mechanism operatively connected to said shaft for bending said distal portion of said shaft in an additional direction out of said plane.

16. The instrument defined in claim 11 wherein said proximal portion of said shaft assumes a first C-shaped configuration in response to operation of said first bending mechanism and wherein said distal portion of said shaft assumes a second C-shaped configuration in response to operation of said second bending mechanism, said first C-shaped configuration and said second C-shape configuration facing opposite sides of said shaft.

17. A cannula and instrument holder for laparoscopic surgical operations, said holder comprising:

a plate member having a surrounding edge; and

a wall surrounding said plate member, said wall being connected to said plate member all along said edge, said wall having a longitudinal axis, said plate member extending substantially transversely to said axis,

said plate member being provided with a plurality of apertures for receiving respective elongate laparoscopic surgical members.

18. The cannula and instrument holder defined in claim 17 wherein said plate member and said wall each have a height dimension extending parallel to said axis, the height dimension of said wall being at least as great as the height dimension of said plate member.

19. The cannula and instrument holder defined in claim 18 wherein the height dimension of said wall is substantially greater than the height dimension of said plate member.

20. The cannula and instrument holder defined in claim 19 wherein said wall has at least one end portion extending as a flange to said plate member.

21. The cannula and instrument holder defined in claim 20 wherein said wall has two end portions extending as endless flanges to said plate

22. The cannula and instrument holder defined in claim 20 wherein said plate member is located at one end of said wall.

23. The cannula and instrument holder defined in claim 17 wherein said plate member is located at one end of said wall.

24. The cannula and instrument holder defined in claim 23 wherein said plate member and said wall form a cup shape.

25. The cannula and instrument holder defined in claim 24 wherein said wall has a first inner diameter at said plate member and a second inner diameter at an end opposite said plate member, said second inner diameter being larger than said first inner diameter.

26. The cannula and instrument holder defined in claim 17 wherein said plate member is inflatable.

27. The cannula and instrument holder defined in claim 26 wherein said wall is inflatable.

28. The cannula and instrument holder defined in claim 17 wherein said plate member is flexible.

29. The cannula and instrument holder defined in claim 17 wherein the cannula and instrument holder consists of said plate member and said wall.

30. The cannula and instrument holder defined in claim 17 wherein said plate member is provided at said apertures with extensions elongating said apertures.

31. The cannula and instrument holder defined in claim 30 wherein said plate member has a first height dimension extending parallel to said axis and said extensions have a second height dimension extending parallel to said axis, said first height dimension being at least as great as said second height dimension.

32. The cannula and instrument holder defined in claim 17 wherein said apertures have a longitudinal dimension extending generally parallel to said axis, at least one of said apertures having a curvilinear or arced shape along the longitudinal dimension of said one of said apertures.

33. The cannula and instrument holder defined in claim 17 wherein said wall is flexible.

34. The cannula and instrument holder defined in claim 17 wherein said wall is at least partially curved in a direction parallel to said axis.

35. The cannula and instrument holder defined in claim 17 wherein at least one of said plate member and said wall is provided with a gas channel for the introduction of an insufflation gas into a patient.

36. The cannula and instrument holder defined in claim 17 wherein said wall is provided with an anchoring element for securing the holder to a patient.

37. The cannula and instrument holder defined in claim 36 wherein said anchoring element is taken from the group consisting of a hook and an eyelet.

38. A stand-alone laparoscopic medical instrument insertable through a laparoscopic trocar sleeve, said instrument comprising:

- an elongate shaft;

- an operative tip disposed at one end of said shaft; and

- an actuator disposed at an opposite end of said shaft, said actuator being operatively connected to said operative tip via said shaft for controlling the operation of said operative tip

said shaft having a proximal end portion and a distal end portion, said distal end portion being continuously bendable to form a smoothly curved C shape, said distal end portion being connected to said proximal end portion via an articulated joint, whereby said distal end portion may be laterally swung with reference to said proximal end portion.

39. The instrument defined in claim 38 wherein said proximal end portion includes a rigid segment connected to said distal end portion via said articulated joint, said proximal end portion further including a flexible segment connected to said rigid

segment on a side thereof opposite said distal end portion, said actuator being connected to a free end of said flexible segment, opposite said rigid segment.

40. A laparoscopic instrument or cannula holder comprising:
an annular body member; and
a plurality of funnel-shaped port elements connected to said body member and extending in a common direction therefrom.